EPCOS

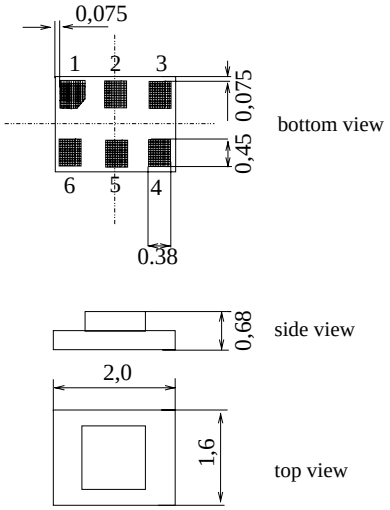
SAW Components

Data Sheet B9004

Chip sized SAW package DCS6Q

Features

- Low-loss RF filter for mobile telephone GSM850/AMPS system, receive path
- Usable passband 25 MHz
- Unbalanced to balanced operation
- Impedance transformation from 50 Ω to 150 Ω
- Suitable for GPRS class 1 to12
- Ceramic package for **S**urface **M**ounted **T**echnology (**SMT**)



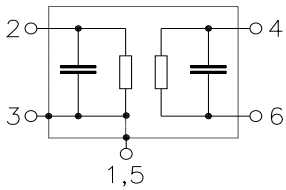
Dimensions in mm, approx. weight 0,006g

Terminals

- Ni, gold-plated

Pin configuration

2	Unbalanced input
4, 6	Balanced output
1, 3, 5	To be grounded



Type	Ordering code	Marking and Package according to	Packing according to
B9004	B39881-B9004-E710	C61157-Z7-C208	F61074-V8152-Z000

Electrostatic **S**ensitive **D**evice (**ESD**)

Maximum ratings

Operable temperature range	T	– 30 / + 85	˚C	
Storage temperature range	T_{stg}	– 40 / + 85	˚C	
DC voltage	V_{DC}	5	V	
ESD	V_{ESD}	100	V	(machine model)
		250	V	(human body model)
Input power at GSM850, GSM900, GSM1800 and GSM1900 Tx bands	P_{IN}	15	dBm	peak power of GSM signal, duty cycle 4:8

Characteristics

Operating temperature range: T = +25 °C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 150 Ω (balanced)

		min.	typ.	max.	
Center frequency	f_C	—	881,5	—	MHz
Maximum insertion attenuation	α_{max}				
869,0 ... 894,0 MHz		—	1,9	2,1	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869,0 ... 894,0 MHz		—	0,6	0,8	dB
Input VSWR	$vswr_{IN}$				
869,0 ... 894,0 MHz		—	1,7	1,9	
Output VSWR	$vswr_{OUT}$				
869,0 ... 894,0 MHz		—	1,7	1,9	
Common mode Suppression	S_{sc12}				
869,0 ... 894,0 MHz		20	25	—	dB
824,0 ... 995,0 MHz		20	25	—	dB
1648,0 ...1990,0 MHz		20	38	—	dB
3296,0 ...3980,0 MHz		20	24	—	dB
Attenuation	α				
0,0 ... 820,0 MHz		45	65	—	dB
820,0 ... 849,0 MHz		35	45	—	dB
914,0 ... 954,0 MHz		25	29	—	dB
954,0 ...6000,0 MHz		45	57	—	dB
6000,0 ...12750,0 MHz		—	25	—	dB

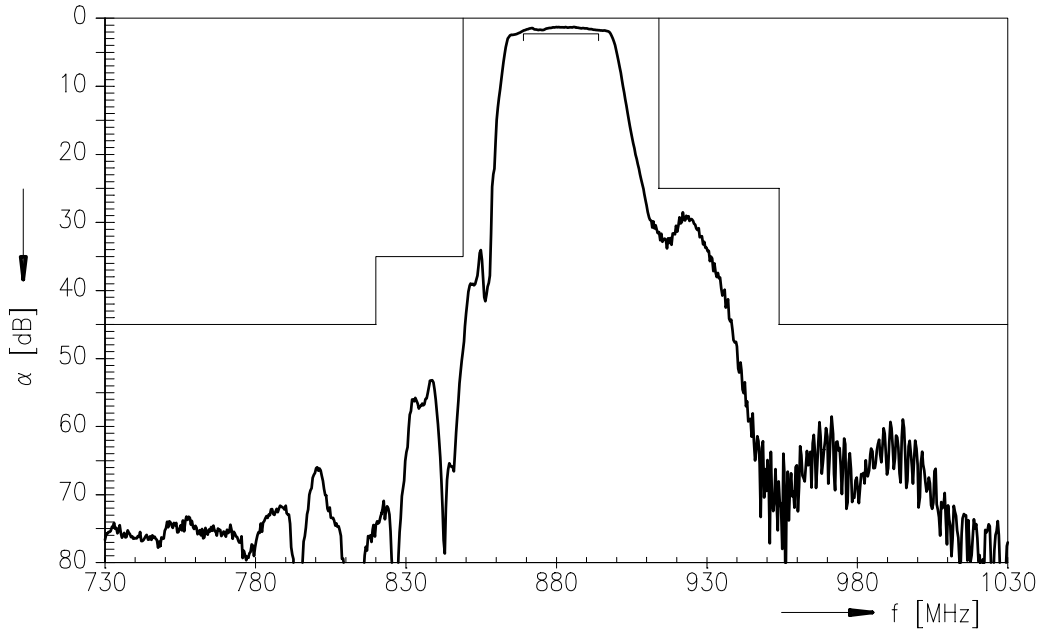
Characteristics

Operating temperature range: T = -10 to +80 °C
Terminating source impedance: Z_S = 50 Ω (unbalanced)
Terminating load impedance: Z_L = 150 Ω (balanced)

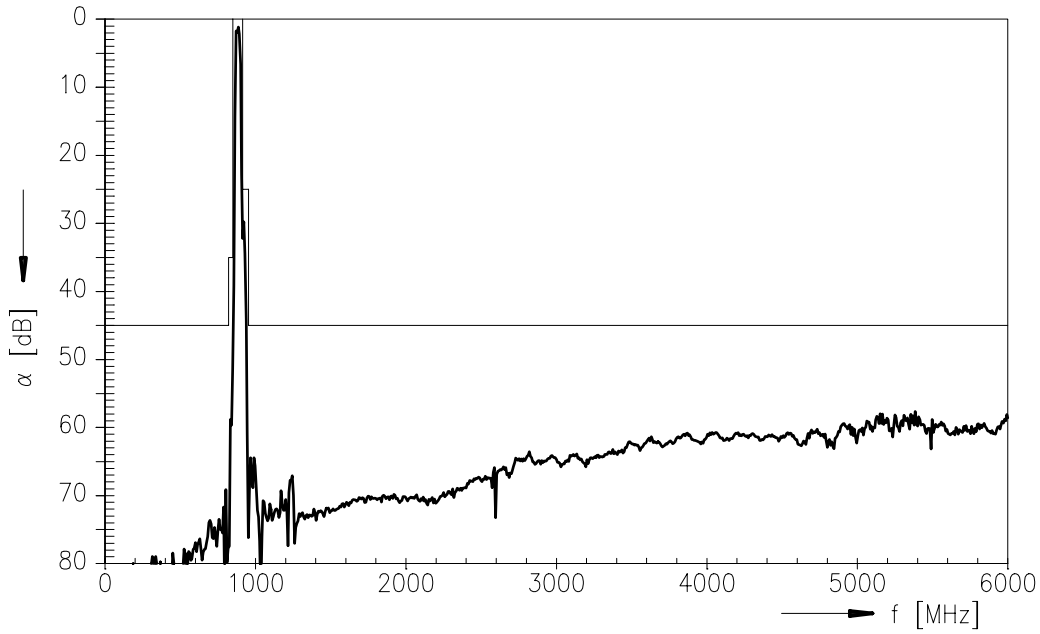
		min.	typ.	max.	
Center frequency	f_C	—	881,5	—	MHz
Maximum insertion attenuation	α_{max}				
869,0 ... 894,0 MHz		—	1,9	2,3[1)]	dB
Amplitude ripple (p-p)	$\Delta\alpha$				
869,0 ... 894,0 MHz		—	0,6	1,0	dB
Input VSWR	$vswr_{IN}$				
869,0 ... 894,0 MHz		—	1,7	2,0	
Output VSWR	$vswr_{OUT}$				
869,0 ... 894,0 MHz		—	1,7	2,0	
Common mode Suppression	S_{sc12}				
869,0 ... 894,0 MHz		20	25	—	dB
824,0 ... 995,0 MHz		20	25	—	dB
1648,0 ...1990,0 MHz		20	38	—	dB
3296,0 ...3980,0 MHz		20	24	—	dB
Attenuation	α				
0,0 ... 820,0 MHz		45	65	—	dB
820,0 ... 849,0 MHz		35	45	—	dB
914,0 ... 954,0 MHz		25	29	—	dB
954,0 ...6000,0 MHz		45	57	—	dB
6000,0 ...12750,0 MHz		—	25	—	dB

1) Maximum insertion attenuation from -30 to -10 & from +80 to +85 °C is 2.5 dB

Transfer function (narrowband; 50 Ω to 150 Ω operation)



Transfer function (wideband; 50 Ω to 150 Ω operation)



Published by EPCOS AG
Surface Acoustic Wave Components Division, SAW MC WT
P.O. Box 80 17 09, 81617 Munich, GERMANY

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